

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended): A controller for a heating device for controllably applying power to a heating device and controlling the heating device temperature by varying the duty cycle characteristics of a periodic control signal, comprising:

an oscillator circuit operable to output a frequency signal;

a counter connected to the oscillator circuit operable to count oscillations of the frequency signal and output a periodic control signal based on said frequency signal;

a power supply circuit including a switch to thereby energize and de-energize said heating device;

an actuating circuit controlling said switch, said actuating circuit controlled by said periodic control signal, wherein said actuating circuit is operable to control said switch to energize said heating device during a portion of said periodic control signal; and

a user controlled temperature adjustment circuit connected to the oscillator circuit, including means for varying the frequency of said frequency signal, whereby said periodic control signal is varied to thereby vary the heating device temperature, wherein said means for varying the frequency includes means for varying an impedance included in said oscillator circuit; and

a plurality of LEDS connected to said user controlled temperature adjustment circuit  
wherein said LEDS provide a means for selecting available heating modes of said controller, such  
that said controller provides for at least one heat mode by detecting the presence of at least one of





second power source to the oscillator circuit when the voltage reaches a second predetermined voltage value; ~~and~~

a user controlled temperature adjustment circuit connected to the oscillator circuit, including means for adjusting the oscillator circuit to vary a frequency of oscillation therein, thereby varying a time interval during which the oscillation count value of the counter is below the predetermined count value and in which the control circuit instructs the switch to connect the first power source to the heating device, wherein said means for adjusting the oscillator circuit includes means for varying an impedance included in said oscillator circuit; and

a plurality of LEDS connected to said user controlled temperature adjustment circuit wherein said LEDS provide a means for selecting available heating modes of said controller, such that said controller provides for at least one heat mode by detecting the presence of at least one of said plurality of LEDS, and deactivates a heat mode in response to the absence of said at least one of said plurality of LEDS.

4. (previously presented): A heating device temperature control apparatus according to claim 3, further comprising:

a rapid heating control circuit operable to control the first switch to connect the power source to the heating device for a predetermined time period upon activation of the controller by said user controlled temperature adjustment circuit to thereby rapidly increase the temperature of said heating device, whereby said user controlled temperature adjustment circuit selects at least one of a plurality of selectable impedances to thereby provide a lower frequency of oscillation output by said oscillator circuit and an increased time interval during which the oscillation count value of the







